California Postsecondary Education Commission

The Gender Gap in California Higher Education: A Follow-Up

September 2006

This report responds to the Commission's interest in pursuing further study of the gender gap for males in California postsecondary education. It provides some additional data on the gap in K-12 graduation rates and university eligibility and discusses the implications for future workforce needs. Recommended areas in which to focus further study and possible partners to support such a study are identified.

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The Commission advises the Governor and Legislature on higher education policy and fiscal issues. Its primary focus is to ensure that the state's educational resources are used effectively to provide Californians with postsecondary education opportunities. More information about the Commission is available at www.cpec.ca.gov.

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Introduction

At its June meeting, the Commission received a report on the growing gender gap in California higher education. The gap has been developing on a national and state level for several decades, and is now visible across all major racial and ethnic groups, although to varying degrees. As female students have increased their rates of college participation and overtaken males in enrollment and degree attainment, a number of studies and media reports have raised questions about the implications of this gap for K-12 and higher education.

The national statistics are extensive and suggest a cause for concern. For example, the research organization, Postsecondary Education Opportunity, looked at the national college participation rate for high school graduates aged 18-24. In 1969, only 19.2% of females in that group were enrolled in college, but by 2000, the rate had grown to 38.4%. Over the same period, the rate for males actually declined from 33.1% to 32.6%. The rates for college enrollment and degree attainment display the same trends.

Similar patterns exist in California. Female students as a whole have outpaced male students in California college enrollment since 1983. The gap can be seen in undergraduate degree attainment, even in some of the traditionally male-dominated disciplines; females also outnumber males in professional school enrollment and degree attainment in most disciplines. These college trends reflect and, to a large extent, result from what is seen in the K-12 system, where more females than males graduate from high school and go on to enroll in college.

This paper responds to the Commission's expressed interest in further study of the college gender gap issue. It discusses recent national level studies, presents some additional data on male participation in California university systems and on gender indicators in the state's K-12 system, and also briefly examines the possible implications for the workforce. The magnitude of the issue is large, and the state-level data provides far more information on the size of the gender gap and the effects of demographic and institutional variables than it does on the possible causes or effects. The issue clearly merits a deeper look, especially at the contribution of the K-12 system to the imbalance in higher education. The Commission, however, does not have sufficient staff to conduct such research within its current workload. Therefore, this paper concludes with what such a study might best include, and identifies a number of potential research partners who might be enlisted to collaborate with the Commission to carry it out.

National Trends

There is no question that a growing gender gap for males exists at both the national and state levels in college enrollment and degree attainment. Numerous articles and reports have provided ample evidence of the trends and two recent national reports have sought to examine the nature and extent of this gender gap and to consider whether it should be seen as a crisis. Concerned higher education officials are looking for ways to encourage more males to enroll. Private institutions that are not restricted from using affirmative action in their admissions policies are now considering introducing affirmative action for males. Other schools are trying to identify incentives such as increased sports opportunities to attract more male applicants.

Two national organizations contend that the gender gap should not be considered a crisis and suggest that any remedies should take into account other important issues. A recent report by the American Council of Education (ACE) urges those examining the gender gap to focus less on gender and more on the racial and ethnic gaps in college enrollment. Although the ACE report acknowledges that a gender gap exists nationally in college enrollment, the author argues that the underrepresentation of African-American and Latino students is a more pressing and worrisome issue, and that the concern over an overall gender gap should not distract from that issue.

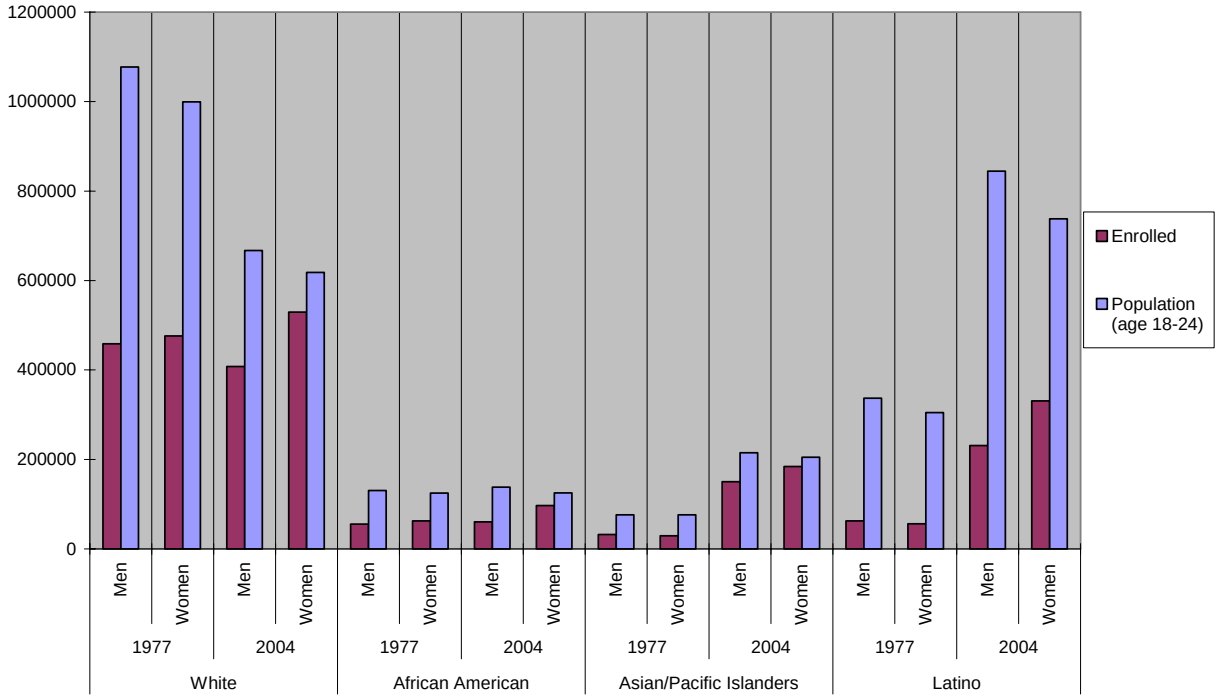
The Education Sector, an independent education policy think tank, draws a similar conclusion to the ACE report. In "The Evidence Suggests Otherwise: The Truth About Boys and Girls," the author, Sara Mead, also argues that the gender gap is less of a crisis compared to gaps found among ethnic groups. The study notes that achievement among male K-12 students has not necessarily declined, but has actually increased in certain areas; additionally, college participation by males has increased steadily. What creates the perception of a crisis is the fact that female K-12 achievement and college participation has been increasing even more rapidly than that of males. The study notes that females are more likely to graduate from high school, and that female seniors in high school are more likely to say they want to attend a four-year institution and to have taken the college-prep classes needed to get there. Although the number of all students enrolling in college regardless of gender has increased, males are less likely overall to go to college and more likely to drop out after enrolling. However, Mead argues that the gaps based on gender alone are far less significant than those based on race and ethnicity, and that the gender gap itself is most significant among already underrepresented students. Mead also notes that the increasing number of female college graduates is not being matched by similar increases of women in higher-paying jobs.

College Enrollment and College-Age Population

Display 1 compares enrollment in California public colleges and universities with the college age (18-24) population in California by gender, ethnicity, and year. The chart displays the increase in participa-

tion rate across all ethnicities and both genders from 1977 through 2004. However, the disparity between males and females in each ethnic group has grown much larger. In 1977, male participation for Asian/Pacific Islander students was greater than female participation, but in 2004, the female participation rate surpassed that of males. For African American students, male participation was already smaller by 7% in 1977 and widened to a 33% gap in 2004. A similar trend is evident with White students. For Latinos, the college participation rates for males and females were about the same in 1977, but the growth of male students since then has been only 8% compared to a 27% increase for females. Despite the increase in *both* male and female participation, the gap between them has grown because female participation has increased at a much faster rate.

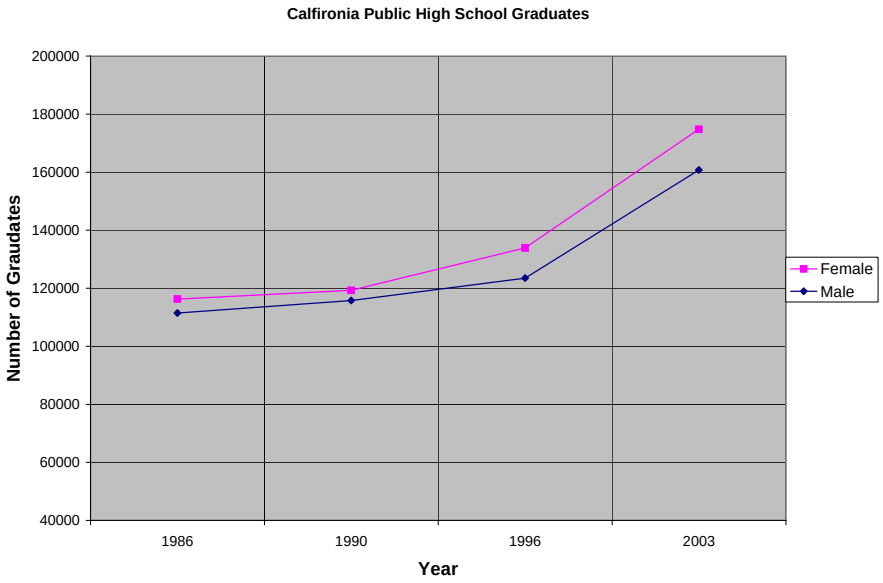
Display 1: California College Enrollment and Proportion of Population (age 18-24) by Ethnicity, Year, and Gender, 1977 to 2004



K-12 Students

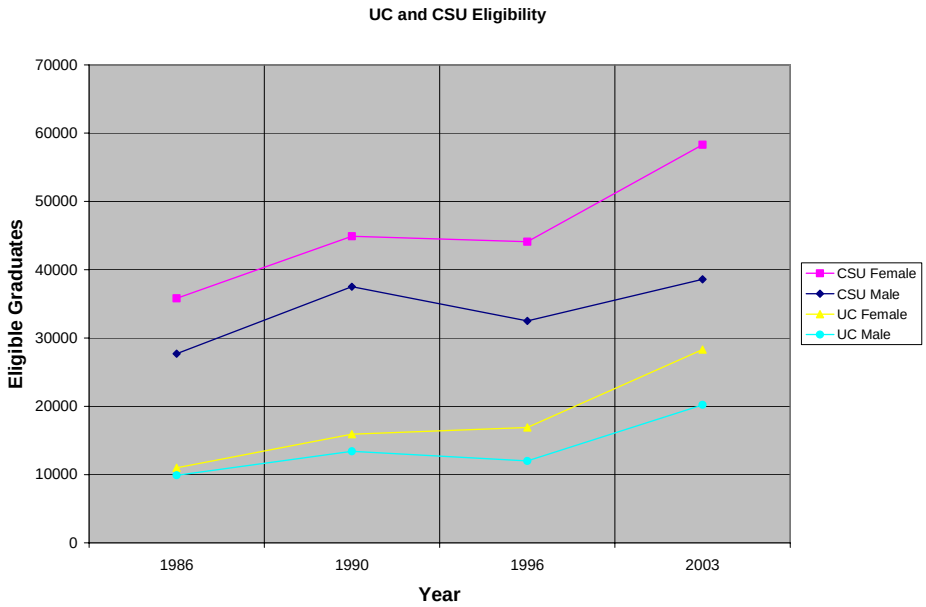
College enrollment trends are closely linked with K-12 enrollment trends. Contributing factors to the gender gap in college enrollment include higher dropout rates and lower graduation rates for males in high school. As shown in Display 2, the number of both male and female high school graduates has increased since 1986, but the growth in the female graduation rate since 1990 has effectively quadrupled the gap by 2003.

Display 2: California Public High School Graduates by Gender, 1986 to 2003



Similar trends are reflected in college eligibility ratios as well. CPEC eligibility studies show that more students are eligible for UC and CSU overall, but the gender gap has grown. Since 1986, the eligibility gender gap has more than doubled for CSU and increased by a factor of seven for UC. In 1996, the CSU eligibility rates for both female and male students showed a decline, but females experienced a much smaller decline than males. At the UC, the eligibility rate for males declined slightly but actually increased slightly for females.

Display 3: UC and CSU Eligibility of High School Students, 1986 to 2003



The widening gap in both high school graduation and college eligibility rates leads to a similar gap in college application rates. Male students are less likely than female students to continue their education after high school. For instance, approximately 58% of high school students who were eligible to go to a UC in 2003 were female, whereas 42% were male. In the same year, 56% of applicants to UC were female and 44% were male. Since males and females are admitted from the applicant pool in approximately the same proportion as they apply, the disparity carries through to initial enrollment figures and is reflected in the overall gap seen throughout the university.

Workforce Implications

The implications of the growing gender gap in college enrollment and degree attainment must be discussed in terms of the state's future workforce. It is unclear at this point how the gender gap is affecting workforce participation and advancement for women or men. Even though women have made up the majority of the college population for a number of years, they are still outpaced by men in earnings. According to the National Association for Female Executives (NAFE), women overall earn 76 cents for every dollar of men's earnings, with the pay gap only narrowing by two percent between 1991 and 2001. Even though women's earnings have increased over the past two decades, the increase is not proportional to the increases in college enrollment and degree attainment. One possible reason is that women still dominate in many disciplines that lead to lower-paying jobs. Historical patterns of employment may also play a role; it is unclear at this point how soon female increases in college education will translate into a smaller gap in earnings.

Concerns for males as a result of the college gender gap include a potential decline in the number of qualified workers in traditionally male-dominated jobs and the possible lack of opportunity for males throughout the workforce due to increasing numbers of female graduates. One example of a possible future problem for males is the comparison between college enrollment growth and trends in the number of engineering degree recipients. Between 1992 and 2002, enrollment in California's public university system grew by 11%, but the number of engineering bachelor's degree recipients shrank by 8%. Private institutions experienced a similar attrition; the number of bachelor's degree recipients grew by 41% overall, but bachelor's degrees in engineering grew by only 27%. The data suggests that, while females are moving into some traditionally male-dominated disciplines, specific disciplines may be hurt by lower male degree attainment rates. Whether this is true or not, and what impact it could have on the workforce, requires far more research, but there is a growing fear that the gender gap in college enrollment and graduation may be a contributing factor to overall concerns about the United States' competitiveness in a global economy.

Proposals for Further Study

Most of the reports and articles published regarding the gender gap in college enrollment and outcomes have focused on national data and trends; it would be beneficial to look more closely at this issue from a state perspective. However, it is important to first determine whether the gender gap is a crisis in California postsecondary education, and then, if necessary, to examine the factors that created it and try to identify ways to alleviate it.

It is clear that further examination of K-12 education trends is an important starting point for understanding the gender gap in college. A good place to start would be to examine the eligibility rates of high school students. A recent Commission report provides an analysis of eligibility rates for the class of 2003. Further analysis of the study could examine rates from a longitudinal standpoint, identifying changes related to gender and race/ethnicity and exploring how those changes have varied over the years. Such data might show how academic preparation varies for different groups. This would also

help identify just how far back in the educational process the gender gap extends. This study may shed light on the factors that influence the gender gap (as well as race/ethnicity gaps) in K-12 education and how they affect the college experience.

Dropout rates for high school students are another factor that should be examined. If students are not finishing high school, they are generally not enrolling in college. Although there is considerable controversy over how to determine accurate dropout rates and California still lacks the comprehensive data system based on unique student identifiers that could more accurately determine that rate, it is clear from many other studies that males drop out more frequently than females, and that the dropout problem is most critical for African American and Latino males. In addition to identifying which students need the most extra support in high school, such an analysis might also provide a context to examine where gender and ethnic gaps begin. Additional study could examine which groups of students struggle the most with completing college and identify what factors increase persistence rates and how these factors vary across gender and race/ethnicity.

In addition, examining demographic trends in different majors and programs would provide some insight into how the gender gap varies by discipline. Further research is needed to understand the decisions students make in selecting those fields to determine whether gender-related factors are involved. Certain fields of study have historically been dominated by one or the other gender, and to some extent, those patterns have persisted even as the gender balance in overall enrollment has changed. Science and engineering fields still tend to enroll more male students whereas education and psychology are dominated by females. By examining shifts in enrollment in various disciplines (including, if possible, whether or not this is reflected in changes in the demographics of occupations those disciplines lead to), it may be possible to understand the actual impact of the gender gap on college outcomes. This study should include race/ethnicity data as well, since the impact of gender varies depending on the race/ethnicity of students.

It would also be useful to examine how the collegiate gender gap has affected gender trends in the workforce. Since implications for the state's future workforce are a major cause for concern over the college gender gap, data is needed to see what changes are occurring in the workforce for females and males, and how that has changed as college demographics have changed. Clearly, women are participating in the workforce in far greater numbers than they did in the 1950s and 1960s and are reaching higher levels of representation in the professions than in the past. However, studies still show wage gaps that favor men over women, even if they have similar positions and education levels. This may be because many males and females still tend to move into fields dominated by their own gender; sex segregation of occupations is still a significant factor in the workforce. What is really happening in California and how work has changed as a result of gender changes at the college level requires considerably more data collection and analysis.

Possible Partnerships

Conducting further meaningful study on the gender gap would require more capacity than the Commission currently has available. In order to move ahead, CPEC needs to identify a research partner or some source of support for additional staffing, at least on a temporary basis. The possibilities for organizations to approach include research institutes and foundations that have a higher education or gender study focus and organizations with a general focus on improving public policy. Staff has identified some possibilities; the following list is not all-inclusive, but does identify some organizations most likely to fit the need and to be interested in partnership with CPEC:

- Institutes that research education, most with an emphasis on higher education:
  - The Higher Education Research Institute (HERI).
  - The Center for Studies in Higher Education (CSHE).
  - Policy Analysis for California Education (PACE).
- Organizations with a general focus on research and analysis to improve public policy:
  - The Public Policy Institute of California (PPIC).
  - The California Research Bureau (CRB).
  - The National Center for Public Policy and Higher Education.
  - The Rand Corporation.
- Foundations that provide funding for education and public policy research:
  - The Stuart Foundation, San Francisco, CA
  - The Henry Luce Foundation, New York, NY
  - The RGK Foundation, Austin, TX
  - The William and Flora Hewlett Foundation, Menlo Park, CA
  - The American Honda Foundation, Torrance, CA